CLAIMS

What is claimed as the invention is:

1. A laminate comprising:

a first polymer film having a first side and a second side;

a web carrier removably attached to a side of the first polymer film;

a print layer on an opposite side of the first polymer film, the print layer having a print pattern;

a second polymer film proximate to the print layer;

the first and second polymer films being laminated together;

the print pattern being substantially free from distortion after lamination as a result of removable attachment of the web carrier to the first polymer film, the web carrier being removable from the first polymer film without distortion of the print pattern.

2. The laminate of claim 1 wherein the first polymer film is cast on to the web carrier.

3. The laminate of claim 1 wherein the web carrier is made of a material selected from a group of materials of: polyester, paper, rigid polymer films, polycarbonate or polyimide, or any other dimensionally stable material which can be removably bonded to one or both of the polymer film layers.

4. The laminate of claim 1 wherein the web carrier is dimensionally stable.

5. The laminate of claim 1 wherein the first and second polymer films are made of one or more materials selected from the group of: polyvinyl fluoride, polyvinylidene fluoride, polyvinyl chloride, acrylic, polyester, polycarbonate, PETG, urethane, ABS or other suitable fluorinated materials or alloys thereof.

6. The laminate of claim 1 further comprising one or more layers of embossing resin between the first and second polymer films.

7. The laminate of claim 6 wherein:

the first polymer film has a thickness in a range of about 0.1 mil to 10 mils;

the embossing resin has an aggregate thickness in a range of about 0.5 mil to 40 mils; and

the second polymer film has a thickness in a range of 0.5 mil to 40 mils.

8. The laminate of claim 1 wherein the web carrier is bonded to the laminate with a bonding force sufficient to maintain dimensionally stability of the laminate during processing of the laminate.

9. The laminate of claim 1 thermally formed as a decorative cover on a structural product.

10. The laminate of claim 6 further comprising at least one layer in addition to the first and second polymer films, web carrier and embossing layer.

11. The laminate of claim 1 further comprising a texture which extends through the web carrier into the first polymer layer.

12. The laminate of claim 6 further comprising a texture which extends through the web carrier and first polymer layer and into the embossing resin.

13. The laminate of claim 6 further comprising a texture in each of the layers of the laminate.

14. A laminate product produced by a process comprising the steps of:

providing a first polymer film and a parallel second polymer film on one side of the first polymer film;

one of the first or second polymer films having a web carrier removably attached thereto;

laminating the first and second polymers films together, and

removing the web carrier without distortion of the laminated first and second polymer films.

15. The laminate product produced by the process of claim 14, further comprising the step of using a first or second polymer film which is cast on to the web carrier.

16. The laminate product produced by the process of claim 14, further comprising the step of attaching a dimensionally stable polyester film as the web carrier to the first or second polymer films.

17. The laminate product produced by the process of claim 14, further comprising the step of forming the first or second polymer films from one or more materials selected from the group of: polyvinyl fluoride, polyvinylidene fluoride, polyvinyl chloride, acrylic, polyester, polycarbonate, PETG, urethane, ABS or other suitable fluorinated materials or alloys thereof.

18. The laminate product produced by the process of claim 14, further comprising the step of providing one or more layers of embossing resin between the first and second polymer films.

19. The laminate product produced by the process of claim 14 wherein the first polymer film has a thickness in a range of about 0.1 mil to 10 mils;

the embossing resin has an aggregate thickness in a range of about .5 mils. to 40 mils, and the second polymer film has a thickness in a range of about 0.5 mil to 40 mils.

20. The laminate product produced by the process of claim 14, further comprising the step of providing a print layer proximate to the first or second polymer films.

21. The laminate product produced by the process of claim 14, further comprising the step of imparting a texture to the laminate.

22. The laminate product produced by the process of claim 14, further comprising the step of imparting a texture to the laminate through the web carrier by embossing.

23. The laminate product produced by the process of claim 14, further comprising the step of combining the layers of the laminate in a roll-forming process.

24. The laminate product produced by the process of claim 14, further comprising the step of attaching the laminate to a substrate prior to removing the web carrier.

25. The laminate product produced by the process of claim 14, further comprising the step of providing a web carrier which has a bonding force with the first or second polymer film which is greater than forces which would distort the first or second polymer films if laminated without the web carrier.

26. The laminate product produced by the process of claim 14, further comprising the step of selecting the polymer films and embossing resin so that distortional forces exerted by the films when laminated are less than a bonding force between the web carrier and one of the polymer films.

27. A laminate product comprising:

a first polymer film; and,

a second polymer film positioned in a plane parallel to and on a first side of the first polymer film;

a print pattern on or proximate to one of the first or second polymer films;

a web carrier removably attached to one side of the first or second polymer film;

the first and second polymer films laminated together;

the print pattern being free from distortion after lamination as a result of removable attachment of the web carrier to one of the polymer films during lamination, and

the web carrier being removable from the laminated first or second polymer films without distortion of the print pattern.

28. The laminate product of claim 27 wherein at least one of the polymer films is cast on to the web carrier.

29. The laminate product of claim 27 wherein the web carrier is made of polyester.

30. The laminate product of claim 27 wherein the first and second polymer films are made of any material selected from the group of: polyvinyl fluoride, polyvinylidene fluoride, polyvinyl chloride, acrylic, polyester, polycarbonate, PETG, urethane or ABS.

31. The laminate product of claim 27 further comprising one or more layers of embossing resin between the first and second polymer films.

32. The laminate product of claim 27 in which the first polymer film has a thickness in a range of about 0.1 mil to 10 mils;

the embossing resin has an aggregate thickness in a range of about 0.5 mil to 40 mils, and

the second polymer film has a thickness in a range of about 0.5 mil to 40 mils.

33. The laminate product of claim 27 further comprising a texture which extends through the web carrier and into the first or second polymer films.

34. The laminate product of claim 33 wherein the texture extends through web carrier, first or second polymer films, and into the embossing resin.

35. The laminate product of claim 27 with the web carrier removed from the laminated first and second polymer films.

36. The laminate product of claim 27 wherein each of the first and second polymer films has a removably attached web carrier.

37. A dimensionally stable laminate product comprising:

a first polymer film;

a web carrier removably attached to one side of the first polymer film;

a second polymer film on a side of the first polymer film opposite the web carrier;

the first and second polymers films laminated together;

the laminated first and second polymer films being dimensionally stable relative to dimensions of the first and second polymer films prior to lamination as a result of the removable attachment of the web carrier to the first polymer film, and

the laminated first and second polymer films being dimensionally stable after removal of the web carrier.

38. The dimensionally stable laminate product of claim 37 wherein the first polymer film is cast on to the web carrier.

39. The dimensionally stable laminate product of claim 37 wherein the web carrier is made of polyester.

40. The dimensionally stable laminate product of claim 37 wherein the first and second polymer films are made of one or more materials selected from the group of: polyvinyl fluoride, polyvinylidene fluoride, polyvinyl chloride, acrylic, polyester, polycarbonate, PETG, urethane, ABS or other suitable fluorinated materials or alloys thereof.

41. The dimensionally stable laminate product of claim 37 further comprising a print proximate to the first or second polymer film, wherein the print remains free from distortion after removal of the web carrier.

42. The dimensionally stable laminate product of claim 37 further comprising a second web carrier removably attached to the second polymer film.

43. The dimensionally stable laminate product of claim 42 wherein the second web carrier is made of a material selected from the group of: polyester, paper, rigid polymer films, polycarbonate or polyimide, or any other dimensionally stable material which can be removably bonded to one or both of the polymer film layers.

44. The dimensionally stable laminate product of claim 37 further comprising one or more layers of embossing resin between the first and second polymer films.

45. The dimensionally stable laminate product of claim 37 wherein the first polymer film has a thickness in a range of about 0.1 mil to 10 mils, and the second polymer film has a thickness in a range of about 0.5 mil to 40 mils.

46. The dimensionally stable laminate product of claim 43 wherein the embossing resin layer or layers has a thickness in the range of 0.5 mil to 40 mils.

47. The dimensionally stable laminate product of claim 37 further comprising a texture which extends through the web carrier and into the first polymer film.

48. The dimensionally stable laminate product of claim 38 further comprising a texture which extends through the web carrier and into the first polymer film and the embossing resin.

49. The dimensionally stable laminate product of claim 37 further comprising a substrate attachment adhesive on the second polymer film.

50. The dimensionally stable laminate product of claim 37 attached to a substrate.

51. The dimensionally stable laminate product of claim 37 further comprising a print layer between the first and second polymer films.

52. A method of making a dimensionally stable decorative laminate which has a print pattern with dimensions which remain substantially the same prior to and after lamination of layers of the laminate, the method comprising the steps of:

providing a first polymer layer with an attached web carrier;

providing a second polymer layer;

providing a print pattern between the first polymer layer and the second polymer layer;

laminating the first and second polymer layers together, and

removing the web carrier from the first polymer layer.

53. The method of claim 52 wherein the print pattern is applied directly to the first polymer layer opposite the web carrier.

54. The method of claim 52 wherein the print pattern is on a separate print layer positioned between the first and second polymer layers.

55 The method of claim 52 wherein the first and second polymer layers are laminated together by rollers.

56. The method of claim 52 further comprising the step of providing embossing resin between the first and second polymer layers.

57. The method of claim 52 further comprising the step of casting the first polymer layer on to the web carrier prior to lamination of the first and second polymer layers.

58. The method of claim 52 further comprising the step of providing a second web carrier removably attached to the second polymer layer.

59. The method of claim 52 further comprising the step of imparting a texture to the first polymer layer through the web carrier.

60. The method of claim 52 further comprising the step of applying a substrate attachment adhesive to the second polymer layer.

61. The method of claim 52 further comprising the step of attaching the laminate to a substrate prior to removing the web carrier from the first polymer layer.

62. The method of claim 52 further comprising the step of imparting a texture to the laminate through the second polymer layer.